

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001120**Date Inspected:** 20-Dec-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2330**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Fu Yu Hong**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** 77 meter mock up assembly**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) inspector, Scott Croff, was present at Zhenhua Port Machinery Company, Ltd (ZPMC) to observe the scheduled mock up construction and production construction of the SAS Superstructure.

Bay 2: The QA inspector was informed that ZPMC workers were fitting the skin plates onto the 77 meter mock up assembly and that they would be finished at approximately 1830 hours. The Quality Control (QC) Liaison Fu Yu Hong confirmed this information with the QA inspector. As reported on the TL-6031 report from 12-19-2007, the QA inspector made observations of welds that appeared to be non-conforming to AWS D1.5 2002 requirements. The QA inspector was informed that examination/verification of the welds could continue after the ZPMC workers finished. The QA inspector noted that until approximately 2030 hours, ZPMC workers were continuing the fitting of the skin plates onto the 77 meter mock up assembly and the QA inspector did not have access to continue the examination of the welds.

The QA inspector observed ZPMC workers preparing to use submerged arc welding (SAW) on the outside corner of MWT-70 of the Lower 114 meter mock up assembly. The QA inspector noted that induction heaters are being used to apply the preheat temperature prior to the welding. At the time of observation, the QA inspector could not verify the preheat temperature.

The QA inspector observed ZPMC workers heat straightening the 114 meter mock up assembly MUC-79. The QA inspector observed that a torch is being used to apply heat in a "V" pattern on the stiffener plates.

The QA inspector observed ZPMC technician Cai Xin Xin conducting ambient magnetic particle testing (MT) of

WELDING INSPECTION REPORT

(Continued Page 2 of 2)

partial joint penetration (PJP) root welds on 89 meter mock up assembly MUSB-MA21 between the intermediate stiffeners and skin plate and/or primary stiffeners. The QA inspector made random observations as the MT was being conducted. The QA inspector noted that several of the root welds are marked "Root MT Acceptable" by the ZPMC technician Cai Xin Xin. The QA inspector noted that several areas on the accepted welds appear to have white paint markings and the QA inspector observed ZPMC workers grinding these areas after the MT inspection has been conducted. The QA inspector also noted that the PJP root welds do not appear to extend the full length of the prepared joint length. See the attached photos of these observations.



Summary of Conversations:

As noted above, the QA inspector Scott Croff had a conversation with the QC Liaison Fu Yu Hong. The QA inspector was informed of the planned work on the 77 meter mock up assembly. The QA inspector was informed that ZPMC plans to have the first skin plates fit up by 1830 hours. Later, after the QA inspector observed that ZPMC personnel were still working on the assembly, the QA inspector asked the QC Liaison to inquire when the work would be finished and the QA inspector would have access to the interior of the assembly. The QA inspector was then informed that he could not determine when the work would be finished.

The QA inspector Scott Croff had conversations with the QA inspector Joe Lanz regarding the above noted observations and conversations. The QA inspector also wrote a summary report of these items to be included in the shift turnover log. There were no other notable conversations during this shift.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Croff, Scott	Quality Assurance Inspector
Reviewed By:	Cuellar, Robert	QA Reviewer